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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/028,897
Filing Date: December 18, 2001
Appellant(s): HOLESCHOVSKY ET AL.

N. Denise Brown
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 7, 2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

Irwin, Sr.	U.S. Patent 5,612,113	3/18/97
Langsdorf et al.	U.S. Patent 6,299,715	10/9/01

Nohr et al.	U.S. Patent 5,578,369	11/26/96
Takizawa et al.	U.S. Patent 6,299,714	10/9/01
Strobel et al.	U.S. Patent 5,244,780	9/14/93
Hinterwaldner et al.	U.S. Patent 5,070,121	12/3/91
Gastiger et al.	U.S. Patent 5,527,629	6/18/96

Irwin is directed to a method of making a carpet wherein a primary backing with fibers tufted into it (greige good) is coated on its back surface with a precoat such as polyurethane adhesive and then a flexible film, such as polypropylene (a polyolefin), that has been corona treated in order to enhance the adhesive properties of the film, is contacted to the back surface of the precoat (Column 4, lines 15-41 and Column 2, lines 46-56).

Langsdorf et al teach a method of making a carpet wherein the back surface of a greige good is coated with a precoat adhesive and that the adhesive can be a foamable system such as a reactive polyurethane system (Column 10, lines 24-29; line 57). A secondary backing in the form of a flexible film such as polypropylene is applied to the foam layer on the greige good and the reactive polyurethane foam layer is fully cured to form a bonded article (Column 1, lines 11-14; Column 4, lines 36-61).

Nohr et al teach that it is known in the art that corona discharge increases the adhesion properties and wettability of polyolefins (Column 6, lines 33-45). Furthermore, Nohr teaches it is known in the art to increase the adhesion properties of polyolefin films, such as polypropylene, to adhesives by treating the polyolefin film with corona

discharge with a power density between 2 and 10 kW/m2 (0.2 to 1.0 W/cm2) by increasing its wettability resulting in increase adherence (Column 6, lines 33-45; Column 3, lines 42-43).

Takizawa et al, Strobel et al, Hinterwaldner et al, and Gastiger et al are optionally cited in support of the assertion that it is notoriously well known and conventional that corona discharge treating a surface increases its adhesive properties (improves adherence by increasing the wettability of the film).

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 15-18 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irwin (U.S. Patent 5,612,113) in view of Langsdorf et al (U.S. Patent 6,299,715) and Nohr et al (U.S. Patent 5,578,369) and optionally taken with Takizawa et al (U.S. Patent 6,299,714), Strobel et al (U.S. Patent 5,244,780), Hinterwaldner et al (U.S. Patent 5,070,121), and Gastiger et al (U.S. Patent 5,527,629).

Irwin is directed to a method of making a carpet wherein a primary backing with fibers tufted into it (greige good) is coated on its back surface with a precoat such as polyurethane adhesive and then a flexible film, such as polypropylene (a polyolefin), that has been corona treated in order to enhance the adhesive properties of the film, is contacted to the back surface of the precoat (Column 4, lines 15-41 and Column 2, lines 46-56).

Irwin is silent towards the power density of the corona discharge applied to the film. It is notoriously well known and conventional that corona discharge treating a surface increases its adhesive properties (improves adherence by increasing the wettability of the film) as shown for example in Strobel et al (Column 1, lines 6-10), Takizawa et al (Column 2, lines 19-27), Hinterwaldner et al (Column 23, lines 53-60), Gastiger et al (Column 1, lines 15-17), or Nohr et al (Column 6, lines 33-45).

Additionally it is known in the art that corona discharge increases the adhesion properties and wettability of polyolefins, as shown in Gastiger et al (Column 1, lines 15-17) and Nohr (Column 6, lines 33-45). Furthermore it is known in the art to increase the adhesion properties of polyolefin films, such as polypropylene, to adhesives by treating the polyolefin film with corona discharge with a power density between 2 and 10 kW/m2 (0.2 to 1.0 W/cm2) by increasing its wettability resulting in increased adherence as shown in Nohr (Column 6, lines 33-45; Column 3, lines 42-43). Additionally one skilled in the art would have readily appreciated that the power density would depend upon a variety of factors such as the material of the film, the material it is to be bonded with, etc. It would have been within the purview of one skilled in the art to determine the optimum power density for achieving the desired adhesion of the film to the precoat keeping these factors in mind and only the expected results would be achieved. It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the applicable power density range for the corona discharge, such as that taught in Nohr et al, in order to achieve the desired adhesion of the film to the precoat in the method of Irwin as suggested in Nohr et al.

Irwin is also silent towards curing the polyurethane adhesive precoat and towards using a reactive polyurethane system. One skilled in the art would have readily appreciated that the precoat would not be fully cured until after the treated flexible film is applied in order to ensure adequate adhesion. Furthermore it is known in the carpet art to apply polyurethane adhesive to a primary carpet backing and fully cure the adhesive after a flexible polypropylene film has been applied, as shown in Langsdorf et al (Column 1, lines 11-14; Column 4, lines 36-61) and it is conventional in the carpet art to use reactive polyurethane systems as precoats, as shown for example in Langsdorf et al (Column 5, line 36). It would have been obvious to one of ordinary skill in the art at the time the invention was made not to fully cure the precoat until after the flexible film, which has been treated with corona discharge within the optimum power density range, has been applied in the method of Irwin and to use a reactive polyurethane system as the precoat, as suggested by Langsdorf et al.

Regarding claim 16, Langsdorf et al teaches applying multiple layers for the precoat and that they can be foams (Column 10, lines 32-43) and as noted above they are not fully cured until after the flexible film has been applied. It would have been obvious to use a known combination of adhesive and foam to apply to a greige good before applying a flexible film in the method of Irwin, as modified above.

Regarding claim 17, Irwin teaches adhering a foam layer to the back surface of the corona treated flexible film (Column 4, lines 39-41).

Regarding claim 18, one skilled in the art would have readily appreciated that the curing temperature and duration would depend upon a variety of factors such as the

material worked upon, the thickness of the adhesive, the intensity of the curing source, etc. It would have been within the purview of one skilled in the art to determine the parameters for achieving an adequate adherence and to determine the optimum parameters. It would have been obvious to determine the optimum parameters.

Regarding claims 20 and 21, it is well known and conventional in the carpet art to have foams that comprise reactive polyurethane systems, as shown for example in Langsdorf et al (Column 5, line 36). It would have been obvious to use known materials for the foam in the method of Irwin, as modified above.

Regarding claim 22, Irwin teaches using polyolefin films such as polypropylene or polyethylene (Column 2, lines 46-48).

Regarding claim 23, Irwin teaches using a flexible film with a thickness between 1 and 5 mils (.025 to .127 mm).

Regarding claim 24, as noted above it would have been obvious to one of ordinary skill in the art to determine the applicable power density range for the corona discharge and to determine the optimum range.

Claims 25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langsdorf et al (U.S. Patent 6,299,715) in view of Irwin (U.S. Patent 5,612,113) and Nohr et al (U.S. Patent 5,578,369) and optionally taken with Takizawa et al (U.S. Patent 6,299,714), Strobel et al (U.S. Patent 5,244,780), Hinterwaldner et al (U.S. Patent 5,070,121), and Gastiger et al (U.S. Patent 5,527,629).

Langsdorf et al teach a method of making a carpet wherein the back surface of a greige good is coated with a precoat adhesive and that the adhesive can be a foamable system such as a reactive polyurethane system (Column 10, lines 24-29; line 57). A secondary backing in the form of a flexible film such as polypropylene is applied to the foam layer on the greige good and the reactive polyurethane foam layer is fully cured to form a bonded article (Column 1, lines 11-14; Column 4, lines 36-61). Langsdorf et al is silent towards corona treating the flexible polypropylene film within the claimed power density range prior to applying the film to the greige good.

Irwin is directed to a method of making a carpet wherein a primary backing with fibers tufted into it (greige good) is coated on its back surface with a precoat such as polyurethane adhesive and a flexible film, such as polypropylene, that has been corona treated in order to enhance the adhesive properties of the film, is contacted to the back surface of the precoat (Column 4, lines 15-41 and Column 2, lines 46-56).

One skilled in the art would have readily recognized in the carpet art it is desirable for such flexible films to remain adequately adhered to the greige good and it would have been obvious to take known steps to ensure adequate adhesion of the flexible polypropylene film to the foam layer in the method of Langsdorf et al, such as corona treating the film prior to application as suggested in Irwin. It is notoriously well known and conventional that corona discharge treating a surface increases its adhesive properties (improves adherence by increasing the wettability of the film) as shown for example in Strobel et al (Column 1, lines 6-10), Takizawa et al (Column 2, lines 19-27), Hinterwaldner et al (Column 23, lines 53-60), Gastiger et al (Column 1, lines 15-17), or

Nohr et al (Column 6, lines 33-45). Additionally it is known in the art that corona discharge increases the adhesion properties and wettability of polyolefins, as shown in Gastiger et al (Column 1, lines 15-17) and Nohr (Column 6, lines 33-45). Furthermore it is known in the art to increase the adhesion properties of polyolefin films, such as polypropylene, to adhesives by treating the polyolefin film with corona discharge with a power density between 2 and 10 kW/m2 (0.2 to 1.0 W/cm2) by increasing its wettability resulting in increase adherence as shown in Nohr (Column 6, lines 33-45; Column 3, lines 42-43). Additionally, one skilled in the art would have readily appreciated that the power density would depend upon a variety of factors such as the material of the film, the material is to be bonded with, etc. It would have been within the purview of one skilled in the art to determine the optimum power density for achieving the desired adhesion of the film to the precoat keeping these factors in mind and only the expected results would be achieved. It would have been obvious to one of ordinary skill in the art at the time the invention was made to treat the flexible polypropylene with corona discharge in order to enhance its adhesive properties (increase adherence by increasing the wettability of the film) in the method of Langsdorf et al as suggested in Irwin and to determine the applicable power density range for the corona discharge, such as that taught in Nohr et al, in order to achieve the desired adhesion of the film to the reactive polyurethane foam, as suggested in Nohr et al.

Regarding claim 27, one skilled in the art would have readily appreciated that the curing temperature and duration would depend upon a variety of factors such as the material worked upon, the thickness of the adhesive, the intensity of the curing source,

etc. It would have been within the purview of one skilled in the art to determine the parameters for achieving an adequate adherence and to determine the optimum parameters. It would have been obvious to determine the optimum parameters.

Regarding claim 28, Langsdorf et al teaches the flexible film is polypropylene, which is a polyolefin.

Regarding claim 29, Irwin teaches using a flexible film with a thickness between 1 and 5 mils (.025 to .127 mm) and it would have been obvious to apply flexible films of known thickness in the method of Langsdorf et al, as modified above.

Regarding claim 30, as noted above it would have been obvious to one of ordinary skill in the art to determine the applicable power density range for the corona discharge and to determine the optimum range.

(10) Response to Argument

It is preliminarily noted that in making a determination of obviousness, one must look at what the combined teachings of the references would have suggested to those of ordinary skill in the art. As stated in *In re Keller*, 642 F.2d 413,425, 208 USPQ 871, 881 (CCPA 1981):

> The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

In addition, it is well settled that with regard to the issue of obviousness, the combined teachings of the prior art as a whole must be considered. *EWP Corp. v. Reliance*

Universal, Inc., 755 F.2d 898, 907, 225 USPQ 20, 25 (Fed. Cir.), *cert. Denied*, 474 U.S. 843 (1985).

I. The Obviousness Rejection of claims 15-18 and 20-24

Irwin is directed to a method of making a carpet wherein a primary backing with fibers tufted into it (greige good) is coated on its back surface with a precoat such as polyurethane adhesive and then a flexible film (referred to as fluid barrier or fluid impervious film in reference), such as polypropylene (a polyolefin), that has been corona treated in order to enhance the adhesive properties of the film, is contacted to the back surface of the precoat (Column 4, lines 15-41 and Column 2, lines 46-56).

A. Step (A)

Irwin is silent towards the power density of the corona discharge applied to the film. Nohr et al teach that it is known in the art that corona discharge increases the wettability of polyolefins and therefore the adhesive properties of a polyolefin film (Column 6, lines 33-45). Furthermore, Nohr teaches it is known in the art to increase the adhesion properties of polyolefin films, such as polypropylene, to adhesives by treating the polyolefin film with corona discharge with a power density between 2 and 10 kW/m2 (0.2 to 1.0 W/cm2) by increasing its wettability resulting in increased adherence (Column 6, lines 33-45; Column 3, lines 42-43).

Nohr et al does not explicitly state the connection that increase wettability of a film results in increase its adhesive properties (adherence to other substances). Despite the fact that such is notoriously well known and conventional in the art,

Appellants argue there is no such connection. Takizawa et al, Strobel et al, Hinterwaldner et al, and Gastiger et al are optionally cited in support of the assertion that **it is notoriously well known and conventional that corona discharge treating a surface increases its adhesive properties (improves adherence by increasing the wettability of the film)**.

In addition **regardless of why Irwin teaches treating the film with corona discharge one skilled in the art would have readily appreciated that the power density would depend upon a variety of factors such as the material of the film, the material it is to be bonded with, etc**. It would have been within the purview of one skilled in the art to determine the optimum power density for achieving the desired adhesion of the film to the precoat keeping these factors in mind and only the expected results would be achieved.

Appellants argue that combining the teachings of Nohr and Irwin would result in applying the adhesive of Nohr to the primary backing of Irwin and performing all the steps detailed in Nohr for bonding a polypropylene film to the primary backing (Appeal Brief, p. 7). This argument makes it evident that Appellants clearly do not understand the rejection of the claims. The rejection makes no such suggestion in combining the teaching of Nohr and Irwin.

One skilled in the art looking at the teachings of the references as a whole would have readily appreciated that Irwin teaches bonding a polypropylene film, which is corona discharge treated to improve adhesion, to a precoated primary backing and Nohr et al teaches corona discharge treating a polypropylene film with a power density

between 2 and 10 kW/m2 (0.2 to 1.0 W/cm2) by increasing its wettability resulting in increased adherence. **The combined teachings would have suggested to one of ordinary skill in the art to corona treat the polypropylene film of Irwin with a power density in the same range taught in Nohr, which is within the claimed range, and there is sufficient motivation to do so**. *See. In re Keller.*

Appellants go to great lengths to argue that the specific facts of Takizawa et al, Strobel et al, Hinterwaldner et al, and Gastiger et al are not applicable to the present invention. However, Appellants miss the point that they were merely optionally cited as additional support for the assertion that it is notoriously well known and conventional that corona discharge treating a surface increases its adhesive properties (improves adherence by increasing the wettability of the film). **The references do confirm this assertion and are merely noted for this well known and conventional teaching and nothing more**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the applicable power density range for the corona discharge, such as that taught in Nohr et al, in order to achieve the desired adhesion of the film to the precoat in the method of Irwin as suggested in Nohr et al.

B. Steps (B) and (C)

Irwin is also silent towards curing the polyurethane adhesive precoat and towards using a reactive polyurethane system. One skilled in the art would have readily appreciated that the precoat would not be fully cured until after the treated flexible film is

applied in order to ensure adequate adhesion. Furthermore it is known in the carpet art to apply a polyurethane adhesive to a primary carpet backing and fully cure the adhesive after a flexible polypropylene film has been applied, as shown in Langsdorf et al (Column 1, lines 11-14; Column 4, lines 36-61) and it is conventional in the carpet art to use reactive polyurethane systems as precoats, as shown for example in Langsdorf et al (Column 5, line 36).

Appellants argue that combining the teachings of Langsdorf and Irwin would result in replacing the corona treated polypropylene film of Irwin with the skip coated polypropylene film (secondary backing) of Langsdorf, applying it to a precoated primary backing and then curing (See Appeal Brief, pages 6 and 7). This argument makes it evident that Appellants clearly do not understand the rejection of the claims. The rejection makes no such suggestion in combining the teaching of Nohr and Irwin.

Like Irwin, Langsdorf teaches bonding a polypropylene film (referred to as secondary backing in Langsdorf) to a primary carpet backing precoated with a polyurethane adhesive. In addition, Langsdorf teaches that the polyurethane precoat is fully cured after the polypropylene film has been applied and that the polyurethane adhesive can be a reactive polyurethane.

The combined teachings would have suggested to one of ordinary skill in the art to precoat the primary backing of Irwin with a reactive polyurethane as suggested in Langsdorf and to then apply the corona treated polypropylene film of Irwin to the precoated primary backing and to then cure the reactive

polyurethane as suggested in Langsdorf and ther is sufficient motivation to do so. *See. In re Keller.*

As a side note, despite Appellants' apparent assertion to the contrary on page 6 of the Appeal Brief, Langsdorf does not require the polypropylene film (secondary backing) to be skip coated (See Langsdorf, Column 4, lines 43-44). In any event the issue is irrelevant because combination of Langsdorf and Irwin as noted above does not suggest replacing the corona discharge treated polypropylene film of Irwin with the skip coated polypropylene film of Langsdorf.

It would have been obvious to one of ordinary skill in the art at the time the invention was made not to fully cure the precoat until after the flexible film, which has been treated with corona discharge within the optimum power density range, has been applied in the method of Irwin and to use a reactive polyurethane system as the precoat, as suggested by Langsdorf et al.

C. Dimensional Stability and Good Delamination Strength

Appellants assert that benefit of the claimed process is it results in improved dimensional stability such that a secondary backing is not required and the product exhibits increased delamination strength (Appeal Brief, page 5). Throughout the remarks, Appellants argue that the references do not teach or suggest these benefits. However, **the claims do not exclude having a secondary backing or recite a limitation of increased dimensional stability and no unexpected results or other**

secondary considerations sufficient to overcome the rejections have been provided.

Appellants argue that Irwin requires a secondary backing, however the claims do not exclude there being a secondary backing. The method of Irwin as modified with the teachings of Nohr et al and Langsdorf would result in a carpet as disclosed in option (2) noted by Appellants on page 5 of the Appeal Brief. Such a method reads on claim 15.

Appellants point to Table 2 on page 13 of the specification for support of increased delamination strength by treating the films with corona discharge with a power density in the claimed range is an unexpected result. However, as discussed above it is notoriously well known and conventional that corona discharge treating a surface increases its adhesive properties (improves adherence by increasing the wettability of the film). **It follows that increased adhesion would lead to increased delamination strength. Therefore such is not considered unexpected, but rather expected.** In addition **the showing of unexpected results is not commensurate in scope with the claims** because Appellants claim treating a flexible film, which is a broad genus, which covers a multitude of species, yet only shows results for 4 of the multitude of species.

II. The Obviousness Rejection of Claims 25 and 27-30

Langsdorf et al teach a method of making a carpet wherein the back surface of a greige good is coated with a precoat adhesive and that the adhesive can be a foamable system such as a reactive polyurethane system (Column 10, lines 24-29; line 57). A

secondary backing in the form of a flexible film such as polypropylene is applied to the foam layer on the greige good and the reactive polyurethane foam layer is fully cured to form a bonded article (Column 1, lines 11-14; Column 4, lines 36-61).

A. The Teachings of Langsdorf

Appellants argue that what the Examiner takes as being the flexible film of the claim is called a secondary backing in Langsdorf and that the claim does not require a secondary backing (Appeal Brief, page 12). It is unclear what the distinction is between a secondary backing and a flexible film. It appears from the specification that they can be one and the same. The specification describes the flexible film as a polyolefin sheet (page 3, line 14) including polypropylene (page 7, line 16). The polypropylene substrate of Langsdorf is a sheet and it is clearly flexible since it is provided wound up in a supply roll (Column 3, lines 44-45). **The polypropylene substrate (secondary backing) in Langsdorf meets the requirements of being a flexible film.**

Appellants also argue that skip coatings are not required by the claim and appear to argue that Langsdorf teaches that the polypropylene film (secondary backing) must have a skip coat (Appeal Brief, page 12). However such is not the case. The polypropylene film (secondary backing) need not have a skip coat (Column 4, lines 43-44 and 57-61).

B. Step (A)

Langsdorf et al is silent towards corona treating the flexible polypropylene film within the claimed power density range prior to applying the film to the greige good. Irwin is directed to a method of making a carpet wherein a primary backing with fibers tufted into it (greige good) is coated on its back surface with a precoat such as polyurethane adhesive and a flexible film, such as polypropylene, that has been corona treated in order to enhance the adhesive properties of the film, is contacted to the back surface of the precoat (Column 4, lines 15-41 and Column 2, lines 46-56).

One skilled in the art would have readily recognized in the carpet art it is desirable for such flexible films to remain adequately adhered to the greige good and it would have been obvious to take known steps to ensure adequate adhesion of the flexible polypropylene film to the foam layer in the method of Langsdorf et al, such as corona treating the film prior to application as suggested in Irwin. Irwin teaches that corona discharge of a polypropylene film is desired for adherence to a polyurethane adhesive and Langsdorf et al teach the precoat and skip coat are polyurethanes.

Irwin is silent towards the power density of the corona discharge applied to the film. Nohr et al teach that it is known in the art that corona discharge increases the wettability of polyolefins and therefore the adhesive properties of a polyolefin film (Column 6, lines 33-45). Furthermore, Nohr teaches it is known in the art to increase the adhesion properties of polyolefin films, such as polypropylene, to adhesives by treating the polyolefin film with corona discharge with a power density between 2 and 10

kW/m2 (0.2 to 1.0 W/cm2) by increasing its wettability resulting in increased adherence (Column 6, lines 33-45; Column 3, lines 42-43).

Nohr et al does not explicitly state the connection that increase wettability of a film results in increase its adhesive properties (adherence to other substances). Despite the fact that such is notoriously well known and conventional in the art, Appellants argue there is no such connection. Takizawa et al, Strobel et al, Hinterwaldner et al, and Gastiger et al are optionally cited in support of the assertion that **it is notoriously well known and conventional that corona discharge treating a surface increases its adhesive properties (improves adherence by increasing the wettability of the film)**.

In addition **regardless of why Irwin teaches treating the film with corona discharge one skilled in the art would have readily appreciated that the power density would depend upon a variety of factors such as the material of the film, the material it is to be bonded with, etc.** It would have been within the purview of one skilled in the art to determine the optimum power density for achieving the desired adhesion of the film to the precoat keeping these factors in mind and only the expected results would be achieved.

Appellants argue that combining the teachings of Nohr, Irwin, and Langsdorf would result in applying the adhesive of Nohr to the primary backing of Langsdorf and performing all the steps detailed in Nohr for bonding a polypropylene film to the primary backing (Appeal Brief, p. 12). This argument makes it evident that Appellants clearly do

not understand the rejection of the claims. The rejection makes no such suggestion in combining the teachings of Nohr, Irwin, and Langsdorf.

One skilled in the art looking at the teachings of the references as a whole would have readily appreciated that Irwin teaches bonding a polypropylene film, which is corona discharge treated to improve adhesion, to a precoated primary backing and Nohr et al teaches corona discharge treating a polypropylene film with a power density between 2 and 10 kW/m2 (0.2 to 1.0 W/cm2) by increasing its wettability resulting in increased adherence. **The combined teachings would have suggested to one of ordinary skill in the art to corona treat the polypropylene film of Langsdorf with a power density in the same range taught in Nohr, which is within the claimed range, and there is sufficient motivation to do so.** *See. In re Keller.*

Appellants go to great lengths to argue that the specific facts of Takizawa et al, Strobel et al, Hinterwaldner et al, and Gastiger et al are not applicable to the present invention. However, Appellants miss the point that they were merely optionally cited as additional support for the assertion that it is notoriously well known and conventional that corona discharge treating a surface increases its adhesive properties (improves adherence by increasing the wettability of the film). **The references do confirm this assertion and are merely noted for this well known and conventional teaching and nothing more.**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to treat the flexible polypropylene with corona discharge in order to enhance its adhesive properties (increase adherence by increasing the wettability of the

film) in the method of Langsdorf et al as suggested in Irwin and to determine the applicable power density range for the corona discharge, such as that taught in Nohr et al, in order to achieve the desired adhesion of the film to the reactive polyurethane foam, as suggested in Nohr et al.

C. Dimensional Stability and Good Delamination Strength

Appellants assert that benefit of the claimed process is it results in improved dimensional stability such that a secondary backing is not required and the product exhibits increased delamination strength (Appeal Brief, page 5). Throughout the remarks, Appellants argue that the references do not teach or suggest these benefits. However, **the claims do not exclude having a secondary backing or recite a limitation of increased dimensional stability and no unexpected results or other secondary considerations sufficient to overcome the rejections have been provided.** Also as noted above the secondary backing of Langsdorf is taken as being synonymous with the flexible film of claim 25.

Appellants point to Table 2 on page 13 of the specification for support of increased delamination strength by treating the films with corona discharge with a power density in the claimed range is an unexpected result. However, as discussed above it is notoriously well known and conventional that corona discharge treating a surface increases its adhesive properties (improves adherence by increasing the wettability of the film). **It follows that increased adhesion would lead to increased delamination strength. Therefore such is not considered unexpected, but rather**

expected. In addition **the showing of unexpected results is not commensurate in scope with the claims** because Appellants claim treating a flexible film, which is a broad genus, which covers a multitude of species, yet only shows results for 4 of the multitude of species.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

John T. Haran

Conferees:

Doug McGinty

Chris Fiorilla